

## PATENT COOPERATION TREATY

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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 11161P1 WO/ED	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/GB2004/001672	International filing date (day/month/year) 16.04.2004	Priority date (day/month/year) 16.04.2003
International Patent Classification (IPC) or national classification and IPC C11D17/00, C11D3/12		
Applicant RECKITT BENCKISER (UK) LIMITED		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  21.12.2004	Date of completion of this report  25.04.2005	
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Neys, P  Telephone No. +31 70 340-4183  	

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/GB2004/001672

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-42 as originally filed

**Claims, Numbers**

1-16 received on 21.12.2004 with letter of 15.12.2004

**Drawings, Sheets**

1-3 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☒ the claims, Nos. 1-16
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1-19
Inventive step (IS)	Yes: Claims	
	No: Claims	1-19
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

**Re Item V.**

The following documents are referred to in this communication:

- D1 : EP 0 782 846 A (SHISEIDO CO LTD) 9 July 1997 (1997-07-09)
- D2 : EP 0 717 978 A (CURTIS HELENE IND INC) 26 June 1996 (1996-06-26)
- D3 : US 6 022 547 A (SUN WEI MEI ET AL) 8 February 2000 (2000-02-08)
- D4 : WO 01/30308 A (UNILEVER PLC ; LEVER HINDUSTAN LTD (IN); UNILEVER NV (NL)) 3 May 2001 (2001-05-03)
- D5 : US 6 235 298 B1 (GANDOLFO FRANCOIS GERARD ET AL) 22 May 2001 (2001-05-22)
- D6 : WO 02/069917 A (PROCTER & GAMBLE) 12 September 2002 (2002-09-12)

1. The amendments filed with the letter dated 15.12.2004 introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT. The amendments concerned are the following:

(a) the sentence '*whereby reaction between the active ingredients is initiated, the reaction improving or indicating the cleaning performance of the composition*', which has been introduced in claim 1, can not as such be deducted from the description on pages 17 and 19. In the description it is said that 'the active ingredients may react to form different or enhanced active ingredients'. There is no direct linked between an improved cleaning performance or an indication of the cleaning performance and the fact that the two active ingredients react with each other. This is further proven by the following passage (page 17, lines 9-17), where is said that 'the breakdown or rupture of the multiple emulsion system can have the effect of (1) simply bringing two active ingredients together, forming a new active ingredient, (2) enhancing the ability/performance of the original active ingredient(s), (3) releasing a cleaning agent pre-formed in one phase into contact with the active ingredient from a further phase, (4) and/or forming a cleaning agent in-situ from precursors originally held in separate phases.'

This report will therefore be based upon the original set of claims.

2. The present application does not meet the criteria of Article 33(1) PCT, because the

subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

D1 discloses (passages see search report) an oil-in-water-in-oil type multiple emulsion, wherein the outer oil phase contains an organophilic clay mineral as stabilizer. The o/w/o emulsion of D1 are applied in various fields, such as cosmetics for skin and hair, e.g. shampoos and rinse compositions.

D2-D5 (passages see search report) disclose water-in-oil-in-water type multiple emulsions, which are used as hair shampoo, skin cleanser or rinse-off conditioner, and which comprise two topically active compounds in the aqueous layers separated by the oily phase. These active compounds present can be compatible or incompatible.

D6 (passages see search report) discloses oil-in-oil-in-water type multiple emulsions, which are used as hair shampoos, skin cleansers, hair conditioners, hair bleaches, hair dyes, fabric conditioners.

3. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 18 and 19 are not new in the sense of Article 33(2) PCT.

The multiple emulsion compositions of D1-D6 are used for cleaning surfaces.

4. Dependent claims 2-17 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

5. The subject-matter of claim 17 is defined only by reference to the description and drawings, which is not allowable (Rule 6.2(a) PCT).

CLAIMS

1. A cleaning composition comprising a multiple emulsion system, wherein said emulsion system comprises two  
5 active ingredients separated in the emulsion system by an oily or aqueous phase, wherein when said emulsion system is in use as a cleaning composition, then the two active ingredients previously held in separate phases of said system are brought into  
10 contact with each other, whereby reaction between the active ingredients is initiated, the reaction improving or indicating the cleaning performance of the composition.
- 15 2. A composition as claimed in claim 1, wherein said emulsion system is of the oil-in-water-in-oil (o/w/o) type or the water-in-oil-in-water (w/o/w) type.
- 20 3. A composition as claimed in claim 2, wherein said system is of the (w/o/w)) type.
4. A composition as claimed in any one of claims 1 to 3, wherein said active ingredients are brought together by a trigger.
- 25 5. A composition as claimed in any preceding claim, wherein the effective stabilisation of said emulsion system is by a particulate moiety.
- 30 6. A composition as claimed in claim 5, wherein said moiety is capable of exhibiting more than one degree of hydrophobicity.

7. A composition as claimed in claim 6, wherein said moiety is functionalised silica.
8. A composition as claimed in claim 6, wherein said moiety is less than 30 nm in mean diameter.
9. A composition as claimed in any preceding claim, wherein said active ingredients are moieties which have a positive effect on the performance of the system as a cleaning composition.
10. A composition as claimed in any preceding claim, wherein said active ingredients are selected from the group comprising colour molecules/dyes, bleaches, bleach activators, oxidising agents, reducing agents, enzymes, catalysts, peroxides, acidic moieties, acid-stabilised moieties, alkaline moieties, alkaline-stabilised moieties, chlorites, hypochlorites, monomers, cross-linking agents, foam-forming moieties, de-foaming moieties, surfactants, surfactant precursors, and fragrances/malodour combaters.
11. A composition as claimed in any preceding claim, wherein the oily phase of a (w/o/w) emulsion system or the aqueous phase of a (o/w/o) emulsion system comprises an active ingredient as defined in claim 10.
12. A composition as claimed in any preceding claim for use in non-cosmetic, household cleaning duties.

13. A composition as claimed in any preceding claim for use as a hard surface cleaner or a fabric surface cleaner.
- 5 14. A composition as claimed in any preceding claim, wherein said composition is antimicrobial.
- 10 15. Use of a multiple emulsion system as a cleaning composition, wherein said emulsion system is defined in any one of claims 1 to 14.
16. A method of cleaning a surface, the method comprising the use of a cleaning composition as claimed in any one of claims 1 to 14.